

WHAT IS CLAIMED IS:

1 1. A method comprising the steps of:

Sub A1
2 when in a first mode of operation, utilizing a first output to provide a first data lane enable
3 for facilitating access of a portion of a first memory storage location associated with
4 a first memory address; and

5 when in a second mode of operation, utilizing the first output to provide an address bit of a
6 second memory address for facilitating designation of a second memory storage
7 location.

8 2. The method of claim 1 wherein:

9 the first data lane enable facilitates accessing a byte of data associated with the first memory
10 address when in the first mode of operation; and
11 the second memory address accesses a byte wide memory.

12 3. The method of claim 1 wherein:

13 the first data lane enable facilitates accessing a byte of data associated with the first memory
14 address when in the first mode of operation; and
15 the second memory address accesses a word wide memory.

16 4. The method of claim 3 wherein the number of bits associated with the word wide memory is
17 greater than 8.

18 5. The method of claim 1 wherein:

19 the first and second modes of operation utilize the first output to access a device external a
20 device that includes the first output.

- 1 6. The method of claim 5 further comprising the step of:
2 when in a third mode of operation, utilizing the first output to provide information about a
3 memory access internal to the device that includes the first output.

- Sub A1
1 7. The method of claim 1, wherein:
2 the address bit is an additional address bit used to extend an address range when a memory
3 having a width less than a word width is being accessed.

- 1 8. The method of claim 1, further comprising the step of:
2 determining a mode of operation to be one of the first mode of operation and the second
3 mode of operation.

- 1 9. The method of claim 8, wherein:
2 the step of determining the mode of operation is based upon a register value associated with
3 a specific chip select.

- 1 10. The method of claim 1 further comprising:
2 when in the first mode of operation, utilizing a second output to provide an address bit of the
3 first memory address for facilitating designation of the first memory storage location;
4 and
5 when in the second mode of operation, utilizing the second output to provide a second data
6 lane enable for facilitating access of a portion of the second memory storage location
7 associated with the second memory address.

1 11. A method of providing data to a set of pins of a device, the method comprising the steps of:
2 during a first mode of operation, multiplexing a first set of data onto the set of pins to allow
3 the set of pins to provide data representing two least significant bits of a first address,
4 a most significant bit of the first address, and a lane enable;
5 during a second mode of operation, multiplexing a second set of data onto the set of pins to
6 allow the set of pins to provide data representing one least significant bit of a second
7 address, a most significant bit of the second address, and two lane enables; and
8 during a third mode of operation, multiplexing a third set of data onto the set of pins to allow
9 the set of pins to provide four lane enables.

10 12. The method of claim 11, wherein the first, second and third sets of data facilitate an external
11 memory access, wherein the external memory access is external relative to the device.

12 13. The method of claim 12, further comprising the step of:
13 during a fourth mode of operation multiplexing a fourth set of data onto the set of pins to
14 allow the set of pins to provide information relating to an internal memory access.

15 14. The method of claim 11 further comprising the step of:
16 determining the mode of operation is based upon a chip select indicator.

1 15. An apparatus comprising:

2 a set of address nodes to provide address data for address location A(n) through A(2), where

3 A(n) represents a most significant bit for at least a first mode of operation;

4 a first output node to provide one of an address data for address location A(1) and a data lane
5 enable signal based upon a mode of operation;

6 a second output node to provide one of an address data for address location A(0) and a data
7 lane enable signal based upon the mode of operation; and

8 a third output node to provide one of an address data for address location A(n+1) and a data
9 lane enable signal based upon the mode of operation.

Sub A1

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1 16. An apparatus comprising:

2 a first register having an output to indicate one of a first mode of operation and a second
3 mode of operation;

4 an address control portion having an input coupled to the output of the first register, and an
5 output to indicate a value of an address bit when in the first mode of operation;

6 a first data lane enable control portion having an input coupled to the output of the first
7 register, and an output to indicate a first data lane enable value when in the second
8 mode of operation; and

9 an output pin coupled to the output of the address control portion and the output of the first
10 data lane enable control portion.

11 17. The apparatus of claim 16 wherein a multiplexor having a control input coupled to the output of
12 the first register, a first data input coupled to the address control pin, a second data input
13 coupled to the first data lane enable, and an output coupled to the output pin.

14 18. The apparatus of claim 16, wherein the first register is associated with one of a plurality of chip
15 selects.

1 19. A system comprising:

2 a processing module coupled to a set of outputs; and
3 memory operably coupled to the processing module, wherein the memory stores operational
4 instructions that cause the processing module to:
5 utilize a first output to provide a first data lane enable to facilitate accessing of a
6 portion of a first memory storage location associated with a first memory
7 address when in a first mode of operation; and
8 utilize the first output to provide an address bit of a second memory address to
9 facilitate designation of a second memory storage location when in a second
10 mode of operation.

11 20. The system of claim 19 further comprising:

12 operational instructions that cause the processing module to:
13 when in a third mode of operation, utilize the first output to provide information
14 about a memory access internal to the device.

1 21. A method of operating a microcomputer, comprising the steps of:

2 when the microcomputer is in a first mode of operation, utilizing a first output of a
3 microcomputer to provide a first data lane enable for facilitating access of a portion
4 of a first memory storage location associated with a first memory address; and

5 when the microcomputer is in a second mode of operation, utilizing the first output of the
6 microcomputer to provide an address bit of a second memory address for facilitating
7 designation of a second memory storage location.

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